

Claims

1. Procedure for interchanging data between two data
base systems A and B, where, for the unique identification of stored data objects, each of the data base systems uses a primary-key creation logic to generate a system-specific primary key (K_A or K_B) for each data object, and the primary-key creation logics of the two data base systems A and B are independent of one another,
in which, to permit data objects transported from a source data base system A (OLTP-R/3) to a destination data base system B (MS) to be uniquely identifiable, which is necessary for new entries shared across the system, the following steps are carried out:

a) the primary key (K_A) for data objects which are to be transported from the source data base system A to the destination data base system B is compared with a key mapping table (KMT) which contains the primary keys (K_A) and (K_B) for all data objects for which both primary keys (K_A and K_B) have already been generated;

b) if the primary key (K_A) is not yet available in the key mapping table (KMT), a primary key (K_B) of the destination data base system (B) is automatically created using a primary key generator (KG), is stored in the data object and is stored in the key mapping table KMT together with the primary key (K_A) of the source data base system A;

c) if the primary key (K_A) of the source data base system A was found in the key mapping table (KMT), the corresponding primary key (K_B) of the

destination data base system B is stored in the data object.

5 2. Procedure according to Claim 1, in which the primary key generator (KG) is integrated in the destination data base system B.

10 3. Procedure according to one of Claims 1 or 2, in which the primary key (K_B , K_{MS}) of the destination data base system B (MS) is not a component part of the data stored in the data base (OLTP-DB) of the source data base system A (OLTP-R/3).

15 4. Procedure according to Claim 3, in which, if the data object is transferred back to the source data base system A (OLTP-R/3), the primary key (K_B , K_{MS}) of the destination data base system B (MS) is removed from the data object and is parked.

20 5. Procedure for updating the dataset in a second data base system B (MS) as a result of changes which have been made in the dataset in a first data base system A (OLTP-R/3), where

25 the dataset of the first data base system A (OLTP-R/3) contains both data ($D_{R/3}$) which are not relevant to the second data base system B (MS) and data (D_{MIX}) which are relevant to the second data base system B,

30 the data in the data base systems are processed in the form of data objects which each contain a system-specific primary key (K_{MS} , $K_{R/3}$) and

35 the data in the second data base system B (MS) are stored with the two system-specific primary keys ($K_{R/3}$ and K_{MS}),

in which at least some of the following procedural steps are carried out:

5 a) the data $D_{R/3}$ which are not relevant to the second data base system B (MS) are removed from the data object;

10 b) the data object is transferred from the first data base system A (OLTP-R/3) to the second data base system B (MS);

15 c) a key (K_{MS}) which is specific to the data base system B (MS) is created, and the created key (K_{MS}) is added to the data object, and

20 d) the data object (BDoc) produced is put into the storage routine of the second data base system B (MS), and the data contained in the data object are stored in the data base (CD) of the second data base system B (MS).

25 6. Procedure according to Claim 5, in which, before being put into the storage routine, the data record of the data object is complemented with additional values (D_{MS}) which correspond to the dataset of the second data base system B (MS).

30 7. Procedure for updating the dataset in a first data base system A (OLTP-R/3) as a result of changes which have been made in the dataset in a second data base system B (MS), where

35 the dataset of the second data base system B (MS) contains both data (D_{MS}) which are not relevant to the first data base system A (OLTP-R/3) and data (D_{MIX}) which are relevant to the first data base system A,

the data in the data base systems are processed in the form of data objects which each contain a system-specific primary key (K_{MS} , $K_{R/3}$), and the data are stored in the first data base system A (OLTP-R/3) only with the system-specific primary key ($K_{R/3}$) thereof, in which at least some of the following procedural steps are carried out:

- a) the data D_{MS} which are not relevant to the first data base system A (OLTP-R/3) are removed from the data object, and these data are parked in the second data base system B (MS);
- b) the data object is transferred from the second data base system B (MS) to the first data base system A (OLTP-R/3);
- c) the system-specific key (K_{MS}) for the second data base system B (MS) is removed from the data object, and this key (K_{MS}) is parked in the first data base system A (OLTP-R/3);
- d) the data object produced is put into the storage routine of the first data base system A (OLTP-R/3), and the data contained in the data object are stored in the data base (OLTP-DB) of the first data base system A (OLTP-R/3).

8. Procedure according to Claim 7, in which, before being put into the storage routine, the data record of the data object is complemented with additional values (D_D) which correspond to the dataset of the first data base system A (OLTP-R/3).

9. Procedure according to one of Claims 7 or 8, in which at least some of the following further procedural steps are carried out:

5 e) an event is triggered as a result of the storage in the data base (OLTP-DB) of the first data base system A (OLTP-R/3);

10 f) the event is received by a component (RSA) of the second data base system B (MS) which has subscribed to the event;

15 g) the parked key (K_{MS}) specific to the data base system B (MS) is added;

h) data ($D_{R/3}$) which are specific to the first data base system A (OLTP-R/3) are removed;

20 i) said data are transferred to the second data base system B in the form of a data object which contains the data D_{MIX} which are relevant to both data base systems, the key (K_{MS}) specific to the data base system B (MS), and the key ($K_{R/3}$) specific to the data base system A (OLTP-R/3);

25 j) the data (D_{MS}) which are not relevant to the first data base system and are parked in the second data base system B (MS) are added.

30 10. Procedure for newly entering or changing data in a composite system comprising a plurality of data base systems (OLTP-R/3, MS), in which, to prevent data conflicts in the context of the shared new entry of data in any one of the data base systems in the composite system,

35 one of the data base systems (OLTP-R/3) is defined as managing system FS for each data object which

can be interchanged between the data base systems,
and,

5 for each new entry or change in a managed system
GS (MS) of data in the data object which are also
part of the dataset of the managing system FS
(OLTP-R/3), a cross-system confirmation algorithm
is executed, in which

10 a) a data object containing the change is trans-
ported to the managing system FS (OLTP-R/3),

b) the managing system FS creates an acknowledge-
ment in the form of a confirmation or at least
15 partial rejection of the change, and

c) a data object containing the acknowledgement is
transported back to the managed system GS (MS).

20 11. Procedure according to Claim 10, in which a data
base LD of the managed system GS (MS) logs the
confirmation state of a changed data object using
a counter section whose counter reading is
increased with each change in a data record
25 allocated to the counter section and is reduced
with each acknowledgement, so that the counter
section in the managed system GS (MS) makes it
possible to display the confirmation state and the
number of changes for which there is still no
30 acknowledgement.

12. Procedure according to one of Claims 10 or 11, in
which, in the event of the change being at least
partially rejected, a before image of the state
35 before the data change is used in order to restore
this state in the managed system GS (MS).

13. Procedure according to Claim 12, in which, in the event of an error message, the incorrectly changed state is also made available in the managed system GS (MS) for the purposes of correction and further processing.
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14. Computer program product which can be loaded directly into the memory of a digital computer and comprises software sections which are used to execute the steps of the procedure according to one of Claims 1 to 13 when the product is running on a computer.
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15. Computer-compatible storage medium having a computer program product according to Claim 14.
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16. Data base network system, containing a computer program product according to Claim 15.